

Claims

1. Billing device in a communication network, which
 - a) receives a client-initiated service request from a service
5 brokering device,
 - b) generates a billing reference for the client with respect to the service request, the client having to quote said reference to an application server in a subsequent service request,
 - c) receives charging tickets issued by the aforementioned
10 application server, the tickets containing information relating to the charges that fall due for a service user prior to or during the use of the service,
 - d) directs a request for confirmation to the service user's client with respect to a ticket received by the application
15 server,
 - e) implements a registration of charges if it receives a confirmation for the aforementioned ticket from the client.
2. Billing device according to claim 1, characterized in that
20 it sends the aforementioned billing reference to the aforementioned service brokering device, which then sends the information to the client.
3. Billing device according to claim 1,
25 characterized in that it sends the billing reference that has been generated for a client direct to the client.
4. Billing device according to any of claims 1 to 3,
30 characterized in that

the aforementioned registration of charges is carried out equally for a prepaid client and for a billed client.

5. Billing device according to any of claims 1 to 4, characterized in that

5 the aforementioned registration of charges consists in the ticket being stored so that a bill can be generated later.

6. Billing device according to any of claims 1 to 5, characterized in that

10 the aforementioned registration of charges consists in the device updating the client's level of credit or charges.

7. Billing device according to claims 6, characterized in that

15 it informs the client if the credit level reaches or falls below a certain threshold,

a) it informs the application server if there is no longer sufficient credit available.

20 8. Billing device according to any of claims 1 to 7, characterized in that

it informs the client of the charges incurred for the aforementioned registration of charges.

25 9. Billing device according to any of claims 1 to 8, characterized in that

it receives and processes service requests from one or a plurality of service brokering devices.

30 10. Application server which

- a) receives a service request from a client, said service request containing a reference to a billing device,
- b) generates billing tickets with respect to the service and sends these to the billing device if it accepts the service
- 5 request, the tickets containing information relating to the charges that fall due prior to or during the provision of the service for the client,
- c) receives messages from the billing device as to whether the tickets have been confirmed by the client.
- 10 d) maintains the provision of the service for as long as the tickets are positively confirmed by the client.

11. Application server according to claim 10, characterized in that

- 15 it terminates the service link with the client if it receives notification from the billing device that the client has negatively acknowledged a request for confirmation with respect to a ticket.

- 20 12. Application server according to claim 10, characterized in that it terminates the service link with the client if it receives notification from the billing device that the client has completely failed to acknowledge a request for confirmation or a plurality of requests for confirmation with respect to a ticket.

- 25 13. Application server according to claim 10, characterized in that it terminates the service link with the client if it does not receive a receipt from the billing device for the ticket that it
- 30 has generated.

14. Application server according to claim 10, characterized in that

5 it terminates the service link with the client if, in the case of a prepaid user, it receives notification from the billing device with respect to a ticket that there is no longer sufficient credit available.

15. Client which

- 10 a) makes a service request to a service brokering device,
b) after successful authentication of the service request receives a reference for the service requested,
c) from the aforementioned reference establishes a service link with an application server in the service requested,
15 d) receives confirmation requests from a billing device concerning charges falling due with respect to the service,
e) verifies the aforementioned confirmation requests with the billing device and responds thereto.

20 16. Client according to claim 15, characterized in that it cumulates the billing messages transmitted by the billing device with the aid of the confirmation requests and displays these charges to the end user in real time so that the charges can be monitored.

25 17. Method for billing a service in a communication network, according to which
a) a service request is made by a client to a service brokering device,

b) authentication of the client is then carried out with the aid of the service brokering device,

c) the service request is transmitted after successful authentication by the service brokering device of a billing device,

d) a billing reference is generated for the service request by the billing device,

e) the client is sent a reference for the aforementioned billing reference and a reference for the billing device,

f) a service link to an application server for the requested service is established by the client on the basis of the aforementioned service reference and the application server is sent both the billing reference and the reference for the billing device,

g) tickets are produced by the application server and sent to the billing device, said tickets containing information relating to the charges that fall due prior to or during the use of the service,

h) in each case, a confirmation request is directed to the client by the billing device with respect to a ticket,

i) the ticket is used by the billing device for recording the charges if the ticket is confirmed.

18. Method according to claim 17, characterized in that

a) the result of the aforementioned confirmation request is redirected by the billing device to the application server

b) the provision of the service is maintained by the application server for as long as the tickets are positively confirmed by the client.